

A MULTI-LEVEL ANALYSIS OF L2 ORAL DISCOURSE

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The Problem

As the proficiency of second language learners approaches the advanced level, it is still difficult to identify the special features of their speech production that continue to characterize them as second language speakers. Research on speech production has generally focused upon a single level of performance. In this paper, I take the approach that a multi-level analysis provides the means to identify characteristic second language features. I describe these features at the linguistic, thematic, and rhetorical levels in two types of non-interactive oral discourse for high-intermediate English second language (L2) speakers based upon a comparison with English first language (L1) speakers. Initially, I will identify characteristic L2 features at each level and then show how these features combine to influence the listener's impression of L2 speech.

Review of Literature

The study of non-interactive L2 discourse can be summarized in terms of the type of analysis, the type of datum, the topic of study, and the methodology. There are basically two types of analyses: descriptive and comparative. Descriptive studies of L2 speech are few in number. More common, comparative studies examine the first and second language of either the same speaker or different speakers. These two types of analyses mainly utilize narratives elicited as story retellings or cartoon descriptions. Studies of non-interactive L2 discourse have covered a wide range of topics, including fluency (Sajavaara and Lehtonen 1979, Taylor 1981, Mohle 1984, Lennon 1984), speech planning (Raupach 1980b), temporal variables and hesitation phenomena (Deschamps 1980, Raupach 1980a), summarization (Brenzel 1984), and the process of language production (Wiese 1984). With few exceptions these studies have, however, focused upon a single level of language production.

My study is similar to past research because it is a comparison of the features of L2 and L1 discourse. However, it is also different because it is a multi-level analysis of argumentative and expository data.

Methodology

There were ten English L2 subjects and ten English L1 subjects in this study. The L2 speakers (five speakers of Spanish, four speakers of Japanese, and one speaker of Arabic) were adult EFL students at the high-intermediate level in the Department of English as a Foreign Language, Georgetown University. The L1 speakers were graduate students enrolled in various programs in the D.C. area.

Subjects performed both an argument task and a summary task for a listener who was requested not to respond orally. In the first task, the subjects were instructed to take a position on one of two written questions (either 'Should we destroy all nuclear weapons?' or 'Are women equal to men?'), think for a few minutes, and then present their argument to convince a listener that their opinions were right. In the second task, subjects were instructed to retell in their own words the main ideas in either a selection from 'The Growing Deserts' or from 'The Cost of Education' (Zutkowski-Faust, Johnston, Atkinson, Templin, 1983) without referring to the article. The listener had not read the article. The L2 subjects were given the article a day in advance of the recording.

After the speech samples were transcribed, three types of analyses were performed. First, the speech sample of each subject was segmented into intonation units defined according to Chafe (1980:14) by intonational, syntactic, and hesitational criteria. Each unit was coded in terms of the following variables: speaker, length (in the number of words per unit), formal syntactic structure, type of discourse (argumentative or expository), and topic of discourse (the equality of men and women or the destruction of nuclear weapons and desertification or the cost of education). These variables were then analyzed to determine statistically significant differences between the L2 and L1 speakers.

Second, each sample was segmented into clauses in order to identify the thematic structure and, in particular, the types of themes. Intonation units within these clauses were examined in order to locate where the main pitch movement occurred on the tonic element.

Finally, the rhetorical patterns of the argumentative samples were analyzed first by simply dividing each discourse into the major sections-- introduction, body, and conclusion-- according

to their function (Brandt 1970:51-69) and second by identifying the elements within their arguments as claims, grounds, warrants, modal qualifiers, and rebuttals (Toulmin, Rieke, and Janik 1979:25-27).

Results

For each level, I will present the results of my study along with examples from L2 speech that highlight characteristic features.

Linguistic Level

At the linguistic level differences between the intonation unit of L2 and L1 speakers occurred in: (1) length, (2) syntactic structure, and (3) quantity.

1. Length. The mean length in words of the intonation unit of the L2 speaker was significantly shorter than that of the L1 speaker ($t=8.13$, $p<0.001$, two-tailed test, mean L2=5.51, Mean L1=6.84). Moreover, the range in mean length of intonation unit by speaker showed greater variation for L2 speakers than L1 speakers. This length difference is illustrated in Figure 1. Notice that all L1 speakers, with the exception of Speaker 19, produced intonation units of nearly identical length unlike the L2 speakers. There was no statistical difference in the length of units by either topic or type.
2. Syntactic Structure. Although the distribution of categories of syntactic structure of intonation units generally tended to be similar for L2 and L1 speakers, two noteworthy differences occurred as seen in Figure 2. In comparison, L2 speakers produced more noun phrases and fewer clauses. There was little variation in these distributional categories by either topic or type for L2 speakers.
3. Quantity. L2 speakers produced more intonation units than L1 speakers (L2 mean = 102 units per speaker, L1 mean = 77 units per speaker). Table 1 contains a description of the frequency of intonation units for L2 and L1 speakers by type. Whereas L1 speakers produced about the same number of intonation units for both argumentative and expository types of discourse, L2 speakers produced more intonation units in expository discourse than in argumentative discourse.

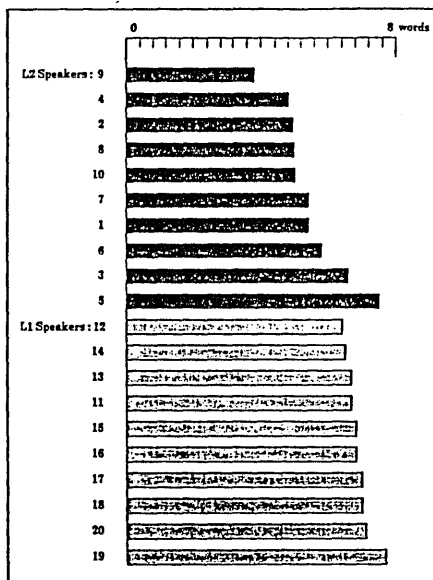


Figure 1: Mean Length of Intonation Unit by Speaker

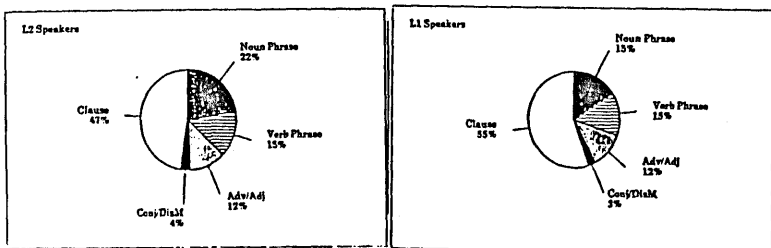


Figure 2: Percentage of Total of Intonation Units for Categories of Syntactic Structure for L2 and L1 Speakers

		Argumentative	Expository	Total
L2	Freq	402	615	1017
	Row%	39%	61%	100%
L1	Freq	379	391	770
	Row%	49%	51%	100%
Total	Freq	781	1006	1787
	Row%	44%	56%	100%

Table 1: Frequency of Intonation Units for L2 and L1 Speakers by Type

In short, special features characteristic of L2 speech include the relative shortness, distributional differences in syntactic form, as well as the quantity of the intonation units produced. Example 1 illustrates these three features: (1)

- (1) a) ...and ..that's if they borrow the money,
- b) he should pay back.
- c) he must pay back.
- d) to the same agent,
- e) or..government.
- f) with interest.

(Speaker 8)

Thematic Level

At the thematic level, I will analyze differences between L2 and L1 speakers in terms of the choice of themes and the distribution of given-new information. My analysis is based upon Halliday's description of thematic and informational structure.

According to Halliday (1985:38-67), a clause functions as a message through its thematic structure. A speaker chooses a theme as a starting point of the message and comments upon that theme in the remainder of the message or the rheme. Themes are described as topical or ideational consisting of a subject, complement, or circumstantial adjunct), textual (continuative, structural, or conjunctive) and interpersonal (vocative, modal adjunct, finite verb, or WH-Interrogative). They are further described as simple or multiple. Simple themes consist of only a topical element. Multiple themes consist of different combinations of textual, interpersonal, or topical elements.

An idealized clause consists of a single intonation unit. That ideal clause contains given information and new information, corresponding to the theme-rheme structure. The given information is recoverable by the listener, and new information is not. The focus on new information is marked by tonic prominence on the tonic element. The tonic element indicates the end of the new information. Context determines where the given element begins. However, in reality, a clause often consists of a number of intonation units so that each intonation unit, in turn, consists of a combination of given and new information. Moreover, each of these intonation units will be marked for tonic prominence.

Given this theoretical orientation, I empirically found where the differences between L2 and L1 speakers lie at the thematic level. A minor difference arises in the choice of theme as illustrated in Figure 3.

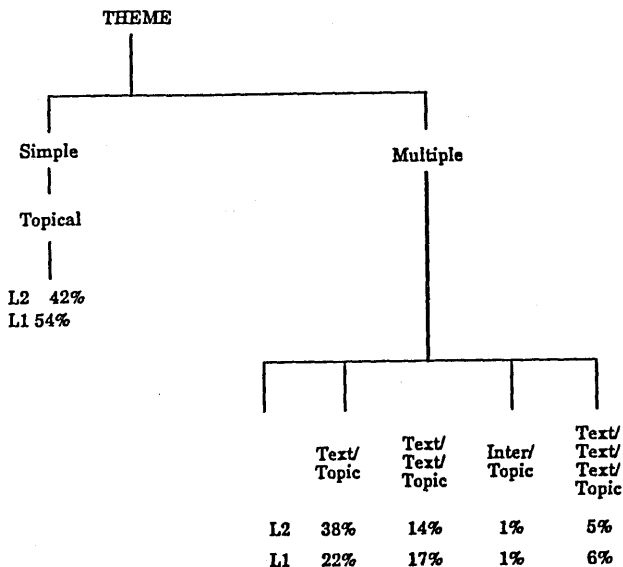


Figure3: Percentage of Simple and Multiple Themes for L2 and L1 Speakers

L2 speakers differed from L1 speakers in two categories. First, the L1 speakers were more likely to use simple themes. For L1 speakers, 54% of their themes were simple whereas L2 speakers used simple themes 42% of the time. Second, as for the subcategories of the multiple themes, L2 speakers were more likely to begin a clause with a multiple theme of the type Textual/Topical.

But does the difference in the choice of theme matter? To answer this, I re-examined the themes, individually and in combination with neighboring themes. It became clear that not only do L1 speakers use more simple themes, but they also use more marked themes, i.e. they used themes that were not the subject of the clause. This added variety to their discourses. In addition, more variety was added because the L1 speakers avoided repeating the same theme in the same form.

In contrast, L2 speakers often carried the same theme over to a number of intonation units, and this repeated form was often a pronoun. They rarely choose any other form for subsequent expressions. It seems that the unexpressed rule was: once a theme recurs in the form of a pronoun, continue to use the same pronoun

form over and over again. This type of choice on the part of the L2 speakers made their discourse more monotonous. This was not helped by the fact that L2 speakers, in using textual-topical themes, selected the textual elements from a small subset of conjunctions-- mainly {and, but, because, so}. It's true that L1 speakers also relied upon these conjunctions, but not nearly to the degree that L2 speakers did. Example 2 below typifies the L2 speakers use of a multiple theme textual/topical structure and direct repetition of pronouns.

- (2) a) and they are studying in the morning,
TEXT TOPIC
b) or..um they--work in the mornings.
TEXT TOPIC
c) but they are going to study in the afternoons.
TEXT TOPIC

(Speaker 3)

An additional difference between the L2 and L1 speakers occurs in the distribution of given-new information, in particular in the assignment of tonic prominence to given information. Simply stated, L1 speakers do not mark given recoverable information with tonic prominence, but L2 speakers do. This feature of L2 speech can be traced to three different tendencies. First, L2 speakers tended to place the tonic prominence on the final element regardless of whether it was given information or not. Example 3 illustrates this point. Desertification in (3b) and world in (3c) are both given tonic prominence, despite their status as given information in the preceding context of the discourse.

- (3) a) this this desertification is serious problem,
Focus
Given New
b) that's reason for desertification,
Focus
New
c) is climate pattern of the world,
Focus
New

(Speaker 9)

Second, since the clause of L2 speakers very often spans over several intonation units and since each intonation unit has an element with tonic prominence, given information is assigned tonic prominence. In example (4), there are two clauses, a-c and d-h. These clauses are formed from a series of intonation units. Since each intonation unit has tonic prominence, given information also is marked by tonic prominence like education in (4f) and students in (4h).

- (4) a) okay the article talks about the cost of education, Focus
Given New
- b) in the United States, Focus
New
- c) and all over the world, Focus
Given New
- d) but specifically, Focus
New
- e) in the United States, Focus
New
- f) the education, Focus
New
- g) is very expensive, Focus
New
- h) for the students. Focus
New

(Speaker 3)

Third, L2 speakers revealed a greater tendency toward repetition, in particular when encountering difficulties in production. Once stated and known to the listener, the repeated information again often received information focus in the next intonation unit. Note in example (5c), the speaker, having struggled with the object the circle of rain in the preceding clause, then marks given information rain in (5d) with information focus.

- (5) a) natural natural effects,
Focus
New Given
b) are talking about,
Focus
New Given
c) the circle of the circle of the natural the rain.
Focus
New
d) the rain,
Focus
Given New
e) has water,
Focus
New

The functions of the major sections in L2 discourse differed considerably from those in L1 discourse. In the introduction, all of the L1 speakers identified the problem, generally by stating and responding to the question or making reference to it. A majority of them also made explicit the subsequent organization by specifying the parameters of the problem, for example, intellectual versus physical capacity for the topic of equality and the theoretical and practical perspectives for the topic of the destruction of nuclear weapons. In contrast, seven of the ten L2 speakers either failed to identify the problem or failed to present some type of organizational framework. Among these, four speakers merely began by charging into their arguments, without identifying the problem; three speakers began by stating the question and simply responding to it. The remaining three speakers, however, both identified the problem and made some indication of discourse organization, for example:

- (9) a) well eh--I'm going to talk about,
 b) if are a woman equals to a man.
 c) I can say that in some ways,
 d) the womans are equal to men,
 e) and in other ways they aren't.

(Speaker 5)

In the body of the discourse, differences between L2 and L1 speakers can be attributed to differences in the function of the introduction and to the structure of their argumentation. For L1 speakers, the introduction served the function of defining the problem through analysis. In this analysis, the L1 speakers viewed the problem from various perspectives and by making these clear in the introduction established the subsequent organization for the discourse. Since the introduction did not serve such a function for the majority of L2 speakers, the body of their discourse was not organized by the introduction as it was for the L1 speakers. Instead, the train of reasoning in the body of the discourse seemed to unfold as simply a listing of claims and grounds. See example (10) where the speaker begins with a claim in (10a) and then lists a series of supporting grounds (d-g, h, and i):

- (10) a) women are not equal to men. (CLAIM)
 b) there are many reasons,
 c) which push me to say that..that.
 d) first of all,
 e) uh--woman,
 f) first of all each one has eh--his different..
 structure body,
 g) ...from each other. (GROUNDS)
 h) women are more emotional, (GROUNDS)
 i) ...a--nd..they have good memories, (GROUNDS)

(Speaker 2)

The structure of the argumentation in the body of these discourses differed considerably between L1 and L2 speakers. L1 speakers presented claims with accompanying grounds that were warranted. At times they qualified claims and offered rebuttals to possible opposing arguments. In contrast, though L2 speakers presented claims with accompanying grounds, they tended to repeat the same claims and grounds. Some speakers employed a kind of chaining strategy; they initially put forth claims with grounds and then took those claims as grounds for what would become the major claims of their discourses. However, this resulted in their discourse being developed around a secondary topic rather than the originally stated topic.

Example (11) illustrates this type of chaining strategy. The speaker begins with the claim in (11b) that women are equal to men and supports this with grounds stating that the equality stems from their equal intelligence in (11d). Then, the claim that women are equal to men becomes the grounds for another claim, namely, that women should have the same jobs as men have.

- (11) a) are women equal to men?
 b) ..yes (CLAIM I) (GROUNDS II)
 c) ..um--I think that..the man physically is sm
 is stronger than woman. (REBUTTAL)
 d) ...um--I think they have the..they are...both
 are intelligents, (GROUNDS I)
 e) and they can have the same..works,
 f) the same jobs, (CLAIM II)

(Speaker I)

In the conclusion of the discourse, L2 speakers differed from L1 speakers not so much in whether or not they asserted the thesis of the argument but in how they did so. L2 speakers tended to repeat claims earlier stated with nearly the same wording while L1 speakers tended to make a summary statement or restate rather than repeat with the same wording.

In sum, alterations in the rhetorical patterns of the discourse of L2 speakers occurred in the overall structure as well as in the structure of the argumentation.

Impact on the Listener

Analysis of linguistic, thematic, and rhetorical levels has shown differences between L2 and L1 speakers. How do differences at each level affect the listener's impression of their speech?

At the linguistic level, we saw that L2 speakers tended to produce more intonation units that were shorter in length and segmented in structure. This means that their speech was a long series of chunks of language where each chunk contained little bits of information. The listener finds such speech tiring as he has to process a large number of intonation units to recover the content which has been watered-down, so to speak.

At the thematic level, L2 speakers tended to use the same form in the selection of themes and to place tonic prominence on given information. The repetition of themes make their speech more monotonous to the ear. The misplacement of tonic prominence makes their speech difficult to process.

At the rhetorical level, L2 speakers deviated from the common pattern exhibited by L1 speakers. The major sections of their discourse simply did not serve the same functions as those of the L1 speaker did. Moreover, the presentation of their arguments was less than effective. As a result their speech was less persuasive to the listener than it might have been.

Moreover, the effect of features at one level combines with the effect of features at the other two levels to produce a certain, subtle impression on the listener. Information is chunked into smaller packets with each containing less information. These information packets contain repeated forms and information miscues. They themselves are contained within a somewhat different framework. Thus, the flow of information requires greater effort on the part of the listener.

Conclusion

In conclusion, this exploratory study has demonstrated that a multi-level analysis is an effective, analytical approach to identify second language features. Unlike single level analysis, it provides a more comprehensive description. Since the selection of these levels in this study was oriented toward impact on the listener, future studies may select different levels according to the focus of their research.

NOTES

(1) I have adopted Chafe's (1980) conventions in transcribing, but assign each intonation unit a letter. Two dots indicate a pause of less than two seconds, three dots longer than two seconds. Two hyphens indicate lengthening of the preceding segment. Sentence final intonation is indicated by (.), clause final intonation by (,).

(2) I have excluded backing, defined as the explicit body of knowledge that is presupposed by the warrant, because this element did not occur in my corpus.

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